

## ABSTRACT

A blood-vessel-shape measuring apparatus that can accurately measures a shape of a section of a blood vessel is provided.

A blood-vessel-shape calculating means 62 calculates, based on respective echo signals detected by first and second arrays 26, 28 that are placed on a skin 20 of a brachial portion 14 as a portion of a living being such that each of the first and second arrays 26, 28 is across a brachial artery 18 located under the skin 20, respective positions of respective portions of the arterial wall that are located right below the first and second arrays 26, 28 and correspond to supersonic-wave elements  $26_n$  of the first array 26 and supersonic-wave elements  $28_n$  of the second array 28, and calculates, based on the respective positions of the respective portions of the arterial wall that correspond to the supersonic-wave elements  $26_n$ ,  $28_n$ , a shape of the brachial artery 18 on an orthogonal section thereof. Thus, even if the brachial artery 18 may run, under the skin 20, in a direction that is not orthogonal to the first or second array 26, 28 or is not parallel to the skin 20, an accurate sectional shape of the brachial artery 18 can be obtained.